

ABSTRACT OF THE DISCLOSURE

A rapid cook convection oven is constructed to efficiently cook a food item by breaking down a thermal insulation layer maintained about the food, while effectively removing contaminants from within a convection air flow. The rapid cook oven preferably includes both a microwave cooking system and a convection cooking system. The convection cooking system is provided with a dual flow fan adapted to simultaneously draw in an oven air flow from a cooking chamber and a fresh air flow from the surroundings. In order to reduce the presence of contaminants and, by extension, smoke, the two air flows are combined in a mixing chamber and passed over a heating element arranged within a combustion chamber prior to re-entry into the cooking chamber.